

White Sands Test Facility holds second Mars design competition

By Cheerie R. Patneau

Eighty-seven students from 25 New Mexico High Schools competed in the Second Annual Mars Settlement Design Competition, Feb 16-18, at Oñate High School in Las Cruces. The Mars Settlement Design Competition is an important event for NASA JSC's educational outreach effort.

The students are challenged to respond to a request for proposal (RFP) where all aspects necessary to actually complete the project have to be considered, including design, construction materials, logistics, transport vehicles, power allocation, robotics systems, life support, cost estimate and schedule. The community they designed had to accommodate thousands of residents. The students were welcomed to the event by Astronaut Dr. Bonnie Dunbar and

Co-Founders Anita Gale and Dick Edwards. Gale and Edwards, who have been designing competitions

for over 15 years, are Boeing systems engineers and Co-Chairs of the California Science Fair. In the opening ceremonies at the Oñate Performing Arts Center, Gale said they have "set the Mars settlement design competitions as management industrial simulations, rather than as technical simulations, as that is as close to working on an industry proposal as we can get."

Both Gale and Edwards believe students who experience the competition become inspired to pursue a career in a technical field, not necessarily in aerospace. Gale said to her audience, "We've heard and received letters from kids who tell us how much this experience has meant to them and how it has changed the direction of their lives. Completing this event is a success for each of you, which in turn helps your life become even more successful."

The students worked feverishly, nearly around the clock, to develop their proposal and prepare a 35-minute presentation for a panel of industry and corporate judges. Volunteers gave up their weekend to be CEOs and coach and mentor their teams: Kurt Rathgeber (Honeywell) and Stephen

McDougle (Honeywell)—Vereinigten Flugfahrten; David Loyd (NASA) and wife Kim — Dougeldyne/Flechtel; Barry Plante (NASA) and Lindy Ford (White Sands Missile Range)—Vulture Aviation; Donna Nelson (Honeywell) and Lonnie Sumpter (Vice Chair, Space Task Force, Executive Committee New Mexico-Grumbo) Nelson, one of the returning CEOs, reported that her "students were very enthusiastic and worked well together."

Ten judges weighed each student team's 50-page response and Sunday-morning presentation against the criteria of the RFP. While the judges deliberated, the students selected from six Science Advisor (SciAd) demonstrations, ranging from boroscopes to micro-gravity to a vacuum. SciAd Bill Curtis challenged students with "Rocketry," a hands-on rocket design project where students make and test-fly their own rockets. Some flew more than 200 feet.

The students returned to the Performing Arts Center to learn whose

proposal had best responded to the RFP. Dick Edwards announced the winning team as Dougeldyne/Fletchtl.

"I was determined to let the kids do their own work and make their own mistakes, but at the same time I didn't want to be evasive when they needed help," said Loyd, CEO of the winning team. "Whenever I felt the urge to tell or direct, I caught myself and asked them where they might go to figure things out or what they might do on Earth to solve a technical challenge."

He said it was amazing to see how enthusiastic the kids were once they got the idea of what they wanted to do to research each problem.

"We stated up front that, as a team, it would be great if we won, but what we were really out to do was have fun and learn something on the way," he said. "At the award ceremony it was heart-warming to see how happy the kids were, just having been a part of the whole experience. And when Dick Edwards circled the winning team's name, Dougeldyne/Fletchtl, it was a better feeling than beating the Soviet hockey team." ■



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Applications must be received by March 30, 2001. Dependents of JSC employees have two college scholarship opportunities.

- The NASA College Scholarship Fund is an Agency-wide scholarship, based on academic accomplishments and activities. Applicants must be pursuing a science or engineering major.
- The JSC Exchange Scholarship is based on academic accomplishments, activities, and need. Applicants may pursue any course of study for this scholarship. For more information please visit the HRO website:

http://jscpeople.jsc.nasa.gov/jsc-hro-2/special_programs/fellowships_&_scholarships.htm